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REMARKS

Claims 1-24 are pending. New claims 22-24 have been added. Claim 15 has been amended solely to improve its form, and not in response to any rejection or objection.

In the Office Action, the Examiner objected to the drawings; objected to the disclosure; rejected claims 15-19 under 35 U.S.C. § 112, ¶1; rejected claims 1, 5, 8, 9, 11, 14, and 20 under 35 U.S.C. § 102(e) as being anticipated by Morris et al. (U.S. Patent No. 6,608,752); rejected claims 1, 4, 7-9, 14, and 20 under 35 U.S.C. § 102(b) as being anticipated by Seidenberg et al. (U.S. Patent No. 4,833,116); and rejected claims 2, 3, 6, 7, 10, 12, 13, and 21 under 35 U.S.C. § 103(a) as being unpatentable over Morris et al. or Seidenberg et al.

The objection to the drawings has been obviated by the new Fig. 5, new paragraph [0008.1], and the amendments to paragraph [0025]. New Fig. 5 merely illustrates the cooling fan and mobile computer or other electronic device that were originally present in paragraph [0025]. No new matter has been added.

The objection to the disclosure has been obviated by the correction to paragraph [0021].

Applicants respectfully traverse the 35 U.S.C. § 112, ¶1 rejection that claims 15-19 are inadequately described in the specification. As stated in M.P.E.P. § 2163.04, "the examiner has the initial burden of presenting evidence or reasoning to explain why persons skilled in the art would not recognize in the disclosure a description of the invention defined by the claims." The statements on page 3 of the Office Action that "this has not been described in the specification, nor is it supported by the drawings" are unsupported conclusions, and not the required "evidence or reasoning" concerning those skilled in the art that is mandated by the M.P.E.P. Thus, the

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Examiner has not met the initial, factual burden for a 35 U.S.C. § 112, ¶1 rejection, and the rejection as stated is improper.

However, in a good faith attempt to respond to the rejection, Applicants note the following. At least paragraph [0012] on page 4 of the specification thoroughly and completely describes "outer walls 110," the word "walls" being plural. Also, at least one longer outer wall 110 and two shorter abutting outer walls 110 are plainly illustrated in each of Figs. 1-3. One skilled in the art would recognize that Applicants had possession of the claimed invention at the time of filing, and the § 112, ¶1 rejection of claims 15-19 should be withdrawn.

Applicants assume, the § 112, ¶1 rejection of claims 15-19 having been overcome, that claims 15-19 are now allowable, because these claims were not rejected over art in the Office Action. Applicants also respectfully remind the Examiner of M.P.E.P. § 707.07(g) and the Office's policy of avoiding piecemeal examination by rejecting claims on all possible grounds (e.g., art as well as 35 U.S.C. § 112, ¶1, if that was intended).

§ 102(e) over Morris et al.

Applicants respectfully traverse the § 102(e) rejection of claims 1, 5, 8, 9, 11, 14, and 20 over Morris et al. Independent claim 1, as amended, requires a device including, *inter alia*, "a wick structure surrounding the boiling structure." Independent claim 9, as amended, requires a heat pipe including, *inter alia*, "a wick surrounding all sides of the boiling structure." Independent claim 20, as amended, requires a system including, *inter alia*, "a wick structure around a perimeter of the boiling structure." Morris et al. fails to disclose all elements of the device, heat pipe, and system in claims 1, 9, and 20.

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Page 4 of the Office Action reads the claimed boiling structure on heat pipe 60 including metals 62/64, and reads the claimed wick on wick material 69 of Morris et al. As may be seen from Fig. 4 of Morris et al., although wick material 69 may be within heat pipe 60, it is not "surrounding" or "around a perimeter of" heat pipe 60 as claimed. Hence, Morris et al. fails to disclose all elements of claims 1, 9, and 20 in their claimed relationship.

The § 102(e) rejection of claims 1, 9, and 20 over Morris et al. is thus improper, and should be withdrawn. Dependent claims 5, 8, 11, and 14 are allowable over Morris et al. at least by virtue of their dependency from claims 1 and 9.

§ 102(b) over Seidenberg et al.

Applicants respectfully traverse the § 102(b) rejection of claims 1, 4, 7-9, 14, and 20 over Seidenberg et al. The requirements of claims 1, 9, and 20 as amended are listed above. Seidenberg et al. fails to disclose all elements of the device, heat pipe, and system in claims 1, 9, and 20.

Page 4 of the Office Action apparently reads the claimed boiling structure on both evaporator 12 and central bore 26, and reads the claimed wick on wick 24 of Seidenberg et al. Central bore 26, however, does not reasonably correspond to the claimed boiling structure. Col. 4, line 66 to col. 5, line 4, of Seidenberg et al. discloses that inside surface 30 of evaporator 12 boils the liquid "because this surface provides the most direct heat transfer." By contrast, central bore 26 is insulated from the external heat source by at least fins 14, grooves 15, and wick 24. Also, col. 5, lines 10-12, disclose that vapor bubbles do not enter into wick 24. Also, there is no

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disclosure in Seidenberg et al. that central bore 26 acts to boil liquid. Thus, central bore 26 cannot and does not correspond to the claimed boiling structure.

As may be seen from Fig. 2 of Seidenberg et al., although wick 24 may be within evaporator 12, it is not "surrounding" or "around a perimeter of" evaporator 12 as claimed. Hence, Seidenberg et al. fails to disclose all elements of claims 1, 9, and 20 in their claimed relationship.

The § 102(b) rejection of claims 1, 9, and 20 over Seidenberg et al. is thus improper, and should be withdrawn. Dependent claims 4, 7, 8, and 14 are allowable over Seidenberg et al. at least by virtue of their dependency from claims 1 and 9.

Applicants explicitly traverse the theories of inherency presented on page 4 of the Office Action that 1) wick material 69 of Morris et al. inherently has a higher thermal resistance than heat pipe 60, and that 2) wick 24 of Seidenberg et al. inherently has a higher thermal resistance than evaporator 12. M.P.E.P. § 2112 requires that "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990) (emphasis in original). The Examiner has not alleged or provided such, and thus has not met the burden of proving inherency (see M.P.E.P. § 2112(IV)). A *prima facie* case of anticipation has not been established for claims 1, 9, and 20 (and their dependent claims) for this additional reason.

§ 103(a) over Morris et al. or Seidenberg et al.

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Claims 2, 3, 6, 7, 10, 12, 13, and 21 are also allowable over Morris et al. and Seidenberg et al. at least by virtue of their dependency from claims 1, 9, and 20 as explained above. In an attempt to advance prosecution, however, Applicants note the following.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. See M.P.E.P. § 2143.

Regarding claims 2, 3, 7, 10, and 21, a *prima facie* case of obviousness has not been established over either reference, because all claim limitations are not taught or suggested. It is axiomatic that all claim limitations must be taught or suggested by the applied art (M.P.E.P. § 2143.03). Claims 2, 3, 7, 10, and 21 require particles with certain diameters or feature sizes. Neither of the applied references teach or suggest particles. Rather, Morris et al. teaches or suggests only solid copper or zinc strips of metal 62 and 64 (Fig. 4, elements 62/64; and col. 2, lines 21-63), and Seidenberg et al. teaches or suggests only a solid aluminum or stainless steel evaporator 12 (Fig. 2, element 12; and col. 3, lines 66-68).

Thus, it is not merely a matter of "changing the size" as alleged on page 5 of the Office Action, but rather supplying a claim element that neither reference teaches or suggests, which is improper. A *prima facie* case of obviousness has not been established over either Morris et al. or Seidenberg et al. for claims 2, 3, 7, 10, and 21 for at least this reason.

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Regarding claims 6, 12, and 13, a *prima facie* case of obviousness has not been established over either reference, because all claim limitations are not taught or suggested. Claims 6, 12, and 13 require certain thermal resistances or resistivities. Neither Morris et al. nor Seidenberg et al. mentions, much less teaches or suggests, thermal resistivity. No evidence has been presented that the materials in the references, as configured, are even capable of the claimed resistivities. Thus, it is not merely a matter of "choosing a material" as alleged on page 5 of the Office Action, but rather supplying a claim element that neither reference teaches or suggests, which is improper. A *prima facie* case of obviousness has not been established over either Morris et al. or Seidenberg et al. for claims 6, 12, and 13 for at least this reason.

Finally, Applicants are not aware of any holding that "where the general conditions of a claim are disclosed in the prior art, discovering the optimum material or size involves only routine skill in the art," as alleged on page 5 of the Office Action. No such holding appears in, for example, M.P.E.P. § 2144.05(II) or M.P.E.P. §§ 2144.04(I-VII). Unless such holding can be produced, this allegation should be withdrawn. A *prima facie* case of obviousness also has not been established for claims 2, 3, 6, 7, 10, 12, 13, and 21, because there is no motivation or suggestion to modify Morris et al. or Seidenberg et al. as proposed.

New claims 22-24 require a device including, *inter alia*, "a porous structure including particles having an average diameter greater than about 50 μm ." As explained above, neither Morris et al. nor Seidenberg et al. teaches or suggests that heat pipe 60 or evaporator 24 is porous or includes particles of the size claimed. Hence, new claims 22-24 are allowable over the applied art.

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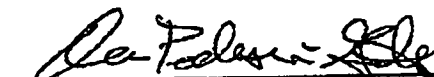
Reconsideration and allowance of pending claims 1-24 is respectfully requested.

In the event that any outstanding matters remain in this application, Applicants request that the Examiner contact Alan Pedersen-Giles, attorney for Applicants, at the number below to discuss such matters.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-0221 and please credit any excess fees to such deposit account.

Respectfully submitted,

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